REMARKS:

Claim 1 is amended. Support for the amendment to claim 1 can be found on page 6, lines 17-24 and page 10, lines 21-24 of the Applicant's specification. Claims 1-3 are pending in the application. Reexamination and reconsideration of the application, as amended, are respectfully requested.

The present invention is directed to an optical device module in which an optical fiber can derive optical output stably from an optical device packaged in the module, even in use under the circumstances of the package extending or contracting due to environmental temperature changes. Another object is to provide an optical device module having an easy and secure airtight sealing structure which can decrease in the number of the fabricating steps, and increase in productivity of the modules. (Applicant's specification, page 5, lines 24 – page 6, line 8).

Applicant believes the foregoing amendments comply with requirements of form and thus may be admitted under 37 C.F.R. § 1.116(a). Alternatively, if these amendments are deemed to touch the merits, admission is requested under 37 C.F.R. § 1.116(b). In this connection, these amendments were not earlier presented because they are in response to the matters pointed out for the first time in the Final Office Action.

Lastly, admission is requested under 37 C.F.R. § 1.116(a) as presenting rejected claims in better from for consideration on appeal.

Claim 1 stands rejected under 35 U.S.C. Section 102(b) as being anticipated by Aiki et al. (U.S. Patent No. 4,997,243). The Applicant respectfully traverses the rejection as to amended claim 1.

Amended claim 1 requires that "the end portion of the optical fiber is offset with respect to a fixed portion of the optical fiber, which fixed portion is below the end portion and which fixed portion is sealed within the insertion tube, to bend the optical fiber between the end portion and the fixed portion of the optical fiber, and wherein an axis of the fixed portion is parallel to an axis of the end portion." The Applicant respectfully submits that Aiki cannot anticipate or render obvious

amended claim 1 because it does not teach or suggest an axis of the fixed portion that is parallel to an axis of the end portion. On the contrary, Aiki indirectly teaches that the axis of the fixed portion of the optical fiber intersects the axis of the end portion of the optical fiber. This intersection is inherent based upon the fact that the two axes are not parallel to one another. This lack of parallelism is clearly evident in Figures 2 and 13 (Aiki, U.S. Patent No. 4,997,243). In addition, Aiki states, "The inclination θ of center axis of the positioning and fixing member 17 to the center axis of the heat sink 14 is determined so that the optical fiber 16 extending between the fiber guide 4 and the positioning and fixing member 17 is able to bend moderately and will not be deformed excessively to an extent liable to cause trouble with optical communication. If the inclination θ is excessively large, the length of the optical fiber 16 between the two fixing positions become excessively large making the assembling work difficult. In this embodiment, the inclination θ is ten degrees." (Column 9, lines 55-66). Thus, the fact that one axis has a non-zero inclination and the second axis is horizontal necessitates that the two axes intersect. This intersection and lack of parallelism occur regardless of the observer's viewpoint. In the present invention, axes 47 and 48 are parallel to one another (Figure 1).

In light of the foregoing, the Applicant respectfully submits that Aiki cannot anticipate or render obvious amended claim 1. Withdrawal of this rejection is thus respectfully requested.

Claims 1 and 2 stand rejected under 35 U.S.C. Section 102(b) as being anticipated by Ecker et al. (U.S. Patent No. 5,155,786). The Applicant respectfully traverses these rejections.

The Applicant respectfully submits that Ecker cannot anticipate or render obvious amended claim 1, because it does not teach or suggest an axis of the fixed portion that is parallel to an axis of the end portion. On the contrary, Ecker, for reasons that are very similar to those discussed above, indirectly teaches that the axis of the fixed portion of the optical fiber intersects the axis of the end portion of the optical fiber. Figure 3 of Ecker reveals an optical fiber 23, that is passed

through a stress relief sleeve 24 and that sleeve is at an angle (i.e., not horizontal). Figure 7 of Ecker reveals optical fiber ends 97 and 98 that are horizontal. In addition, Ecker states, "The V-block 70, with optical fiber 23, secured thereto is placed in a holding tool and ground and polished to produce an appropriate angle for internal reflection of light waves on the end face 98, of the optical fiber/V-block assembly 70." (Column 6, lines 54-58). Thus, for the same reasons as discussed above, the fixed portion axis must intersect the end portion axis.

Accordingly, the Applicant respectfully submits that Ecker cannot anticipate or render obvious amended claim 1. Claim 2 depends from claim 1 and cannot be anticipated or rendered obvious for at least the same reasons as claim 1. Withdrawal of these rejections is thus respectfully requested.

Claim 3 stands rejected under 35 U.S.C. Section 103(a) as being unpatentable over Kwon et al. (U.S. Patent No. 6,190,056) in view of Aiki et al. (U.S. Patent No. 4,997,243). The Applicant respectfully traverses the rejection as to claim 3.

Claim 3 depends from claim 1, and as such includes all the limitations of amended claim 1. The Applicant has already detailed how Aiki fails to teach or suggest that the end portion of the optical fiber is offset with respect to a fixed portion of the optical fiber, which fixed portion is below the end portion and which fixed portion is sealed within the insertion tube, to bend the optical fiber between the end portion and the fixed portion of the optical fiber, and wherein an axis of the fixed portion is parallel to an axis of the end portion. Kwon cannot remedy the defect of Aiki and is not relied upon for the Office for such. Kwon has no teaching or suggestion of this offset and the Office admits that "Kwon fails to disclose an offset between the device end of the fiber and the portion which is fixed in the insertion tube." Therefore, the combination of Aiki and Kwon cannot render the claimed invention obvious.

Furthermore, the Applicant respectfully submits that the teaching, for which the Office relies upon Kwon for, is incorrect. The Office states that "Kwon further discloses a plastically deformable fixture 510 for holing a ferrule 508." Kwon does not disclose this. Kwon actually teaches away from the use of ferrule holder capable

of being deformed plastically. Kwon states, "To reduce temperature-incurred deformation, it is preferable to form each component of a material having a low linear expansion coefficient. The substrate 500, the fixture 510, and the ferrule 508 are preferably of the same material since they are fixed by welding. ... In the apparatus for aligning an optical source with an optical fiber and the optical source module having the aligning apparatus in accordance with the present invention, the fixture is modified in such a way to reduce thermal deformation of the fixture caused by soldering the holder to the fixture to fix the holder and thus the optical fiber can be aligned within an allowable alignment error range. Therefore, the resulting increase of optical coupling efficiency enables fabrication of an optical source module with a higher output under the situation that an optical source with the same performance is used. Furthermore, the linear expansion of the fixture in the diameter direction of the holder is blocked, thereby increasing temperature reliability." (Column 7, lines 2-22).

Thus, in the Kwon invention it is a detriment to have a ferrule, which is fixed to a ferrule holder capable of being deformed plastically, while in the present invention it is a benefit. In the present invention, the plastic deformation of the ferrule holder enables the optical axis of the optical fiber to optically align to an emission end of the optical device. (Applicant's specification, page 7, lines 9-12). These diametrically opposing results would almost forbid one of ordinary skill in the art from employing the teaching of Kwon.

In light of the foregoing, withdrawal of the rejection and allowance of claim 3 is respectfully requested.

In the Advisory Action mailed May 13, 2003, the Examiner refused to enter the amendment claiming that, although the amendments were sufficient to overcome the rejections based on Ecker et al. and Aiki, et al., amended claim 1 would still be anticipated by Nagata et al. (U.S. Patent 5,727,105). Application respectfully submits that amended claim 1 patentably distinguishes over Nagata et al. Figures 1 to 4 in Nagata show that optical fibers which are connected between an optical element 5 and sleeves 9a, 9b in the walls 6a, 6b of a chamber 1 are bent

or curved, but the end portion of each fiber is not offset relatively to the fixed portion of the fiber through the sleeve, which is only prior art of the present invention. Figures 8 to 10 in Nagata et al. show the arrangement of fibers between apertures in the walls is in a bent form, but the fiber is not offset or made parallel between both the fiber portions along the fiber which portions are fixed in the walls. Applicant thus believes that Nagata does not anticipate the claim invention.

Applicant believes the foregoing amendments place the application in condition for allowance and early, favorable action is respectfully solicited.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles telephone number (213) 337-6810 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,

HOGAN & HARTSON L.L.P.

Date: May 29, 2003

By: _____

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